

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method for producing a silicon carbide single crystal, comprising the steps of:
 - providing a graphite-made growth crucible (2) with a low-temperature section and a high-temperature section;
 - placing a seed crystal substrate (5) formed of silicon carbide single crystal in the low-temperature section of the growth crucible;
 - placing a silicon carbide raw material (11) in the high-temperature section of the growth crucible; and
 - depositing a gas sublimated from the silicon carbide raw material onto the seed crystal substrate to thereby grow a silicon carbide single crystal (6),
 - wherein the silicon carbide single crystal is grown with an atmosphere gas that surrounds~~surrounding~~ the growth crucible contains~~containing~~ a silicon gas and with vapor pressure of the silicon gas that surrounds the growth crucible continuously maintained to be higher than that of the silicon gas in the gas sublimated from the silicon carbide raw material in the growth crucible and that in the growth crucible maintained substantially equal to or higher than equilibrium vapor pressure of the silicon gas contained in the sublimated gas.

2. (canceled).
3. (currently amended): The method for producing a silicon carbide single crystal according to claim 1 ~~or claim 2~~, further comprising the steps of:
 - using an outer crucible ~~(1)~~ to surround the growth crucible ~~(1)~~, with a space left therebetween;
 - continuously feeding a silicon raw material ~~(22)~~ from outside into the space; and
 - evaporating the silicon raw material in the space to thereby form a silicon gas serving as the atmosphere gas surrounding the growth crucible.
4. (canceled).
5. (original): The method for producing a silicon carbide single crystal according to ~~claim 4~~claim 3, wherein the silicon raw material is in solid form.
6. (original): The method for producing a silicon carbide single crystal according to claim 5, wherein the silicon raw material in solid form is in a form of powder constituted by particles having a diameter of 0.2 to 5 mm.

7. (currently amended): The method for producing a silicon carbide single crystal according to ~~any one of claims 4 to 6~~claim 3, wherein the silicon raw material is fed at a rate of 0.5 to 20 mg/second.

8. (currently amended): The method for producing a silicon carbide single crystal according to ~~claim 4~~claim 3, wherein a position within the space to which the silicon raw material is fed has a temperature regulated to at least 1,900°C.

9. (currently amended): The method for producing a silicon carbide single crystal according to ~~claim 4~~claim 3, wherein the atmosphere gas surrounding the growth crucible has a pressure regulated to 1.33×10^2 to 4.0×10^4 Pa.

10. (previously presented): The method for producing a silicon carbide single crystal according to claim 9, wherein the atmosphere gas surrounding the growth crucible has a pressure regulated to 6.65×10^3 to 2.0×10^4 Pa.

11. (previously presented): The method for producing a silicon carbide single crystal according to claim 9, wherein a growth rate of the silicon carbide single crystal is 1 mm/hour or more.

12. (currently amended): A silicon carbide single crystal produced by the method according to claim 1, wherein the silicon carbide single crystal exhibits a micropipe density of 10,000 micropipes/cm² or less.

13. (currently amended): An apparatus for producing a silicon carbide single crystal, comprising:

a graphite-made growth crucible (2) having a low-temperature section and a high-temperature section;

a seed crystal substrate (5) formed of silicon carbide single crystal and placed in the low-temperature section;

a silicon carbide raw material (14) placed in the high-temperature section,

~~whereby a gas sublimated from the silicon carbide raw material is deposited onto the seed crystal substrate to thereby grow a~~ the silicon carbide single crystal is grown with an atmosphere gas that surrounds the growth crucible containing a silicon gas (6) and with vapor pressure of the silicon gas that surrounds the growth crucible continuously maintained to be higher than that of the silicon gas in the gas sublimated from the silicon carbide raw material in the growth crucible and that in the growth crucible maintained substantially equal to or higher than equilibrium vapor pressure of the silicon gas contained in the sublimated gas; and further comprising:

~~an outer crucible (1) disposed to surround the growth crucible, with a space left therebetween; and~~

~~means for continuously feeding a silicon raw material (22) from outside into the space.~~

14. (canceled)

15. (currently amended): The apparatus for producing a silicon carbide single crystal according to claim 13 ~~or claim 14~~, wherein the growth crucible has a lid ~~(3)~~ and is provided therein with a supporter (4) having a lower surface to which the seed crystal substrate is to be attached, with a space left between an upper surface of the supporter and the lid of the growth crucible.

16. (new): The apparatus for producing a silicon carbide single crystal according to claim 13, and further comprising:

an outer crucible disposed to surround the growth crucible, with a space left therebetween; and

means for continuously feeding a silicon raw material from outside into the space.

17. (new): The apparatus for producing a silicon carbide single crystal according to claim 16, wherein the feeding means is a metered feeding apparatus for feeding a solid silicon raw material at a rate of 0.5 to 20 mg/second.

18. (new): The apparatus for producing a silicon carbide single crystal according to claim 16 or claim 17, wherein the growth crucible has a lid and is provided therein with a

supporter having a lower surface to which the seed crystal substrate is to be attached, with a space left between an upper surface of the supporter and the lid of the growth crucible.